REMARKS

By this Amendment, claims 1-4, 8-9 and 11-12, and the specification are amended, claims 5, 7 and 10 are canceled without prejudice or disclaimer to the subject matter therein and claim 13 is newly added. Support for the amendment to claim 1 may be found, for example, from page 9, line 26, to page 10, line 8. In addition, the specification is amended to correct minor clerical mistakes. No new matter is added. Accordingly, after entry of this Amendment, claims 1-4, 8-9 and 11-13 will remain pending. Reconsideration and allowance of the present patent application based on the foregoing amendments and following remarks are respectfully requested.

Applicant appreciates the Examiner's indication that claims 2-4, 8-9 and 11 would be allowable if rewritten in independent form. In response, claims 2-4, 8-9 and 11 are rewritten in independent form. Accordingly, Applicant respectfully submits that claims 2-4, 8-9 and 11 are now in condition for allowance.

Claim 1 was objected to because of an informality noted in the Office Action. In response, claim 1 is amended in the manner suggested by the Office Action. Accordingly, reconsideration and withdrawal of the objection to claim 1 are respectfully requested.

Claims 1, 5 and 7 were rejected under 35 U.S.C. §103(a) based on Ragle *et al.* (U.S. Pat. No. 4,502,085) (hereinafter "Ragle") in view of Knowles *et al.* (U.S. Pat. No. 4,823,212) (hereinafter "Knowles"). The rejection is respectfully traversed.

Claims 5 and 7 are canceled without prejudice or disclaimer, thus rendering moot the rejection of claims 5 and 7.

Claim 1 recites a disk drive comprising, *inter alia*, an actuator which includes the head and rotates in a radial direction of the disk medium to move the head to a target point. As conceded by the Office Action, Ragle does not disclose, teach or suggest this feature. However, Applicant respectfully submits that there are additional features that are novel over Ragle. For example, Ragle fails to disclose, teach or suggest a disk drive wherein the disc medium includes a number of data tracks having servo areas and data areas and, when the head records data on the data areas in one of the outer and inner radiuses of the disk medium, the servo data whose inclination differs from that of the data is recorded on the servo areas in one of the outer and inner radiuses by a servo head which sets a skew angle different from a skew angle of the head, and the inclination of the servo data becomes smaller than that of the data recorded on the data areas by the head.

Ragle discloses a bit encoding scheme that establishes, for each track, a prescribed alignment for work-bits and for servo-bits, this alignment being arranged to automatically indicate registration or centering of transducers with respect to a track. (*See* col. 6, lines 54-58). Ragle discloses that the servo-bits are aligned semi-orthogonally to the work-bits along any given track. (*See* col. 6, lines 63-65). In order to record and play the servo-bits and the work-bits having different inclinations with a head that has a plurality of magnetic gaps of different inclinations, Ragle further discloses a scheme to select one which minimizes azimuthal loss from among the magnetic gaps (*See* col. 2, lines 67-68, col. 3, lines 1-16 and col. 4, lines 3 - 12). However, Ragle does not disclose, teach or suggest that the servo data whose inclination differs from that of the data is recorded on the servo areas in one of the outer and inner radiuses by a servo head which sets a skew angle different from a skew angle of the head and the inclination of the servo data becomes smaller than that of the data recorded on the data areas by the head.

Knowles fails to remedy the deficiencies of Ragle. Knowles discloses a system and a method for normalizing the amplitude of a servo code derived signal in a disc drive that includes an embedded servo code format of separate dibit fields, recorded in half track steps. Knowles also discloses that a defect dibit is recorded if the following servo gap is found to be defective during manufacture so that the next servo gap may be ignored. (*See* Abstract and col. 7, lines 21-31). However, Knowles fails to disclose, teach or suggest the above mentioned features of claim 1. Therefore, any reasonable combination of Ragle and Knowles cannot result, in any way, in the invention recited by claim 1. Therefore, claim 1 is believed to be patentable over Ragle, Knowles and a combination thereof.

Accordingly, reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. §103(a) based on Ragle in view of Knowles are respectfully requested.

Claims 6 and 12 were rejected under 35 U.S.C. §103(a) based on Ragle in view of Knowles and Tsuchiya *et al.* (U.S. Pat. No. 6,795,277) (hereinafter "Tsuchiya"). The rejection is respectfully traversed.

Claim 12 is amended to depend from independent claim 8, which was indicated as being allowable by the Office Action. Therefore, it is respectfully submitted that claim 12 is allowable.

Claim 6 is patentable over Ragle, Knowles and a combination thereof at least by virtue of its dependency from claim 1 and for the additional features recited therein. Namely, claim 6 is patentable over Ragle, Knowles and a combination thereof at least because this claim recites a disk drive wherein the disc medium includes a number of data tracks having

servo areas and data areas and, when the head records data on the data areas in one of the outer and inner radiuses of the disk medium, the servo data whose inclination differs from that of the data is recorded on the servo areas in one of the outer and inner radiuses by a servo head which sets a skew angle different from a skew angle of the head, and the inclination of the servo data becomes smaller than that of the data recorded on the data areas by the head.

Tsuchiya does not remedy the deficiencies of Ragle and Knowles. Tsuchiya discloses a thin film single pole head for perpendicular magnetic recording which has a read element and a write element, which comprises a reproducing head and a recording head, and has a structure where no auxiliary poles are disposed between the reproducing element of the reproducing head and the main pole of the recording head. (*See* col. 3, lines 65-67 and col. 4, lines 1-4). However, Tsuchiya fails to teach or suggest the above mentioned features of claim 6. Therefore, any reasonable combination of Ragle, Knowles and Tsuchiya cannot result, in any way, in the invention of claim 6. Therefore, claim 6 is believed to be patentable over Ragle, Knowles, Tsuchiya and a combination thereof.

Accordingly, reconsideration and withdrawal of the rejection of claims 6 and 12 under 35 U.S.C. §103(a) based on Ragle in view of Knowles and Tsuchiya are respectfully requested.

Claim 10 was rejected under 35 U.S.C. §103(a) based on Ragle in view of Knowles and Applicant's admitted prior art. Claim 10 is canceled without prejudice or disclaimer, thus rendering moot the rejection of claim 10.

Claim 13 is newly added and defines additional subject matter that is novel and non-obvious over the art of record. Claim 13 is patentable over the art of record at least by virtue of its dependency from claim 2, which was indicated as being allowable by the Office Action. Accordingly, it is respectfully submitted that claim 13 is in condition for allowance.

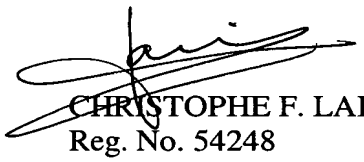
The rejections having been addressed, Applicant respectfully submits that the application is in condition for allowance, and a notice to that effect is earnestly solicited.

If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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